

- an opening as the end of a connection from the vacuum chamber to an external environment (7),
- a valve (9) which ensures gastight closing and opening of the connection between the vacuum chamber (5) and the external environment (7)
- means for producing a detachable substantially gastight coupling between [the] an outwardly directed opening and a device to produce a vacuum,
- the vacuum holding device (1) comprises a seal (15) which seals the vacuum chamber gastight against the contact surface (14) towards the outside, wherein the apparatus for producing a vacuum comprises

- a piston suction pipe (13) which has an opening at the beginning (24) of the suction path (26) with suction piston (28) and wherein
- at the end of the suction path (26) and opening (26) passable by the piston (28) is provided so that when the opening is passed in one go ambient air penetrates into the piston suction pipe (13).

Claim 2 (amended) The vacuum holding device (1) according to Claim 1, characterized in that the valve (9) is constructed as a form selected from the group consisting of substantially conical, spherical and hemispherical.

Claim 3 (amended) The vacuum holding device (1) according to claim 1 wherein the connection between the vacuum chamber (5) and the external environment

β^2 has a form selected from the group consisting of conical, spherical and hemispherical bearing surface (8) to accommodate the valve (9).

β^3 Claim 5 (amended) The vacuum holding device (1) according to claim 1 wherein one part of the means for producing a detachable, substantially gastight coupling from an upwardly directed opening is a surface.

Claim 8 (amended) The vacuum holding device (1) according to claim 1 wherein the vacuum holding device (1) has a holding receptacle for an equipment holder.

β^4 Claim 9 (amended) A method for securing a vacuum holding device (1) by means of an apparatus for producing a vacuum according to claim 1 to a contact surface (14) comprising:

- positioning the vacuum holding device (1) on a contact surface (14),
 - producing a detachable, substantially gastight coupling between the outwardly directed opening of the vacuum holding device (1) and a piston suction pipe (13),
 - producing a vacuum in a vacuum chamber (5) by withdrawing a suction piston (28) from the piston suction pipe (13) until the suction piston (28) passes an upper opening (26) and
 - removing the apparatus for producing a vacuum.
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Claim 10 (amended) A vacuum holding device (1), wherein the vacuum holding device has:

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- a vacuum chamber (5) which is open in the direction of the contact surface (14),
 - an opening as the end of a connection between the vacuum chamber and the external environment (7),
 - a valve (9) which ensures gastight closing and opening of the connection between the vacuum chamber (5) and the external environment (7) and
 - means for producing a detachable substantially gastight coupling between the outwardly directed opening and an apparatus for producing a vacuum,
 - the valve (9) is constructed as a form selected from the group consisting of substantially conical, spherical or hemispherical and
 - the connection between the vacuum chamber (5) and the external environment has a form selected from the group consisting of conical, spherical and hemispherical bearing surface (8) to accommodate the valve (9),
 - the vacuum holding device has a seal (15) which closes the vacuum chamber gastight towards the outside against the contact surface (14) and
 - the valve (9) extends as a strip or rod with a support.

Claim 11 (amended) The vacuum holding device (1) according to Claim 10, wherein at the end of the strip or rod there is at least one support in the form of at least one member of the group consisting of one pin and wedge.